

# Work Order ID 51977

September 11, 2009 8:44:08 AM



Page 1

Item ID: D3883-1

Accept



Setup Start



Revision ID: B

Item Name: Saddle, Outboard LH

Stop



Start Date: 09/14/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 09/23/2009 Req'd Qty: 4.00



Customer:

Reference:

Approvals:

Process Plan: MF

Date: 09-09-11

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr	Revision Nbr
D3883	B

100



HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

0.00

Memo

Program Batch No. 51977

Double check by: MF

1-Machine Step No 1 per Folio FA815 and inspect per attached Dimension Sheets

2-Machine Step No 2 per Folio FA641 and inspect per attached Dimension Sheets

3-Machine Step No 3 per Folio FA815 and inspect per Dimension Sheets

0.00

SL / mnt  
09/10/09

4 0

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

0.00

SL / mnt  
09/10/09

4 0

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

September 11, 2009 8:44:08 AM

**Reference:**

**Accept**

**Setup Start**

**Stop**

**Cust Item ID:**

**Customer:**

Run Start

**Stop**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

## Quality Control

QC8- Inspect parts - second check

## Memo

### Set Up/ Run Hours

0.00

0.00

<b>Draw</b>	<b>Draw</b>
<b>Number</b>	<b>Rev.</b>

09/10/30

**Plan  
Code**

**Accept Qty**

Reject  
QtyReject  
Number

**Insp.  
Stamp**

4 ~~1~~

## Hand Finishing

Chemical Conversion Coat per QSI005 4.1

## Memo

0.00

0.00

0.00  
BK 09-12-2

(4)

## Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

## Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

0.00

BL 09-11-2

4

11:40  
E. 320°  
12:10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 51977**

September 11, 2009 8:44:08 AM



Page 3

Item ID: D3883-1

Accept



Setup Start



Revision ID: B

Stop



Item Name: Saddle, Outboard LH

Start Date: 09/14/2009 Start Qty: 4.00



Cust Item ID:

Required Date: 09/23/2009 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

MO 09/11/09

X1

160

Identify as per dwg &amp; Stock Location: 429

0.00



Packaging

Memo

0.00

Packaging

9/11/03 40 SP

170

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/11/03 J

MF

09-11-03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

September 11, 2009 8:44:08 AM

Page 1

Work Order ID: 51977



Parent Item: D3883-1RevB



Parent Item Name: Saddle, Outboard LH

Start Date: 09/14/2009

Required Date: 09/23/2009

Comments:

Start Qty: 4.00

Required Qty: 4.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-015RevB		Manufactured	No			100	Each	0.0000	4.0000			
Saddle Billet												

B 51834 X4 JL 09/10/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	51977
<b>Description:</b> Saddle, Outboard, LH		<b>Part Number:</b>	D3883-1
<b>Inspection Dwg:</b> D3883 <b>Rev.</b> B		<b>Page 1 of 1</b>	

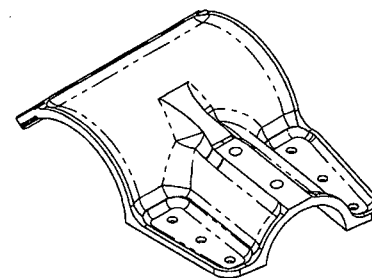
Inspect dimensions highlighted on inspection sheet drawing and record below:

Dim	Min	Max	Go/No Go Gauge	Recorded Actual Dimensions				By	Date
				1	2	3	4		
A	2.870	2.880		2.875	2.876	2.876	2.876		
B	1.433	1.443		1.438	1.436	1.436	1.436		
C	0.638	0.658		.645	.642	.644	.642		
D	3.895	3.905		3.900	3.900	3.900	3.898		
E	0.257	0.262		.258	.260	.260	.260		
F	0.605	0.625		.613	.610	.612	.612		
G	1.120	1.130		1.125	1.124	1.124	1.124		
H	2.245	2.255		2.250	2.252	2.249	2.252		
I	2.000	2.020		2.000	2.004	2.005	2.004		
J	0.140	0.165		.152	.156	.154	.154		
K	0.240	0.260		.249	.249	.252	.253		
L	0.115	0.135		.124	.124	.124	.123		
M	0.140	0.165		.154	.155	.154	.163		
N	0.720	0.780		.765	.772	.773	.767		
O	0.240	0.260		.257	.258	.253	.256		
P	0.110	0.140		.130	.140	.140	.140		
Q	0.178	0.198		.188	.188	.188	.188		
R	2.825	2.885		2.868	2.868	2.868	2.870		
S	0.316	0.321		.320	.320	.320	.320		
T	0.990	1.010		1.003	1.002	1.003	1.003		
U	1.745	1.755		1.750	1.748	1.747	1.748		
V	5.990	6.010		5.998	6.001	5.999	6.000		
W	1.245	1.255		1.247	1.248	1.240	1.247		
X	0.490	0.510		.499	.498	.496	.498		
Y	1.220	1.280		1.250	1.249	1.242	1.247		
Z	2.495	2.505		2.500	2.500	2.495	2.498		
AA	0.313	0.318		.316	.317	.313	.316		
AB	0.020	0.040		.021	.021	.021	.021		
AC	0.760	0.765		.760	.760	.760	.760		
AD	0.215	0.220		.218	.218	.217	.218		
AE									
AF									
Accept/Reject									

Measured by:	SL
Date:	09/10/28




Audited by:	SL
Date:	09/10/30

Rev	Date	Change	Revised by	Approved
A	09.10.22	New Issue	KJ	



RELEASED  
07/07/15

- 1) MATERIAL: 7075-T7351 ALUMINUM PER AMS-QQ-A-250/12, OR QQ-A-250/12 OR ASTM B209 (REF DAT SPEC D6101-015)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
POWDER COAT GLOSS "WHITE" (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: ENGRAVE PART AND BATCH NUMBER IN THIS AREA TO  
MAX. DEPTH OF 0.010 WITH A MIN. TOOL RAD OF R0.010
- 7) WEIGHT: 1.00 lbs
- 8) ENGRAVE DART LOGO TO MAX DEPTH OF 0.015 WITH MIN RAD 0.250

A	D6101-015 WAS D8102-015, ZN A7-1; ADD 0.648, ZN D7-1; ADD 0.615, ZN D6-1, 0.125, ZN D7-2; ADD 0.060 & R0.031, ZN B5-2; 0.75 WAS 0.728, ZN C7-2		RF	09.06.30
B	NEW ISSUE		RF	09.03.30
REV.	DESCRIPTION		BY	DATE
DESIGN	RF	<b>DART AEROSPACE USA, INC.</b>		
DRAWN	RF	PORT HADLOCK, WA		
CHECKED		DRAWING NO.	REV.	
MFG. APPR.		D3883	SHEET 1 OF	
APPROVED		TITLE	SCALE	
DE APPR.		<b>OUTBOARD SADDLE</b>	NT	
DATE	09.06.30			

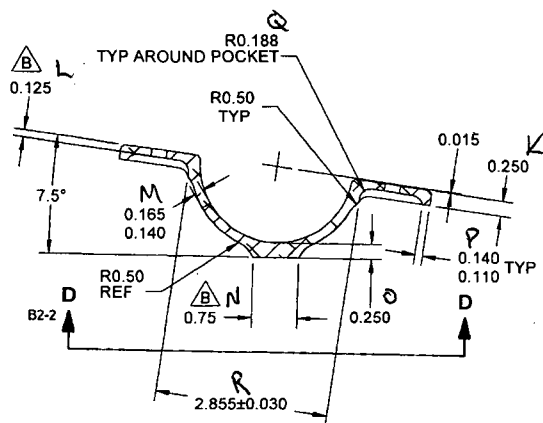
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

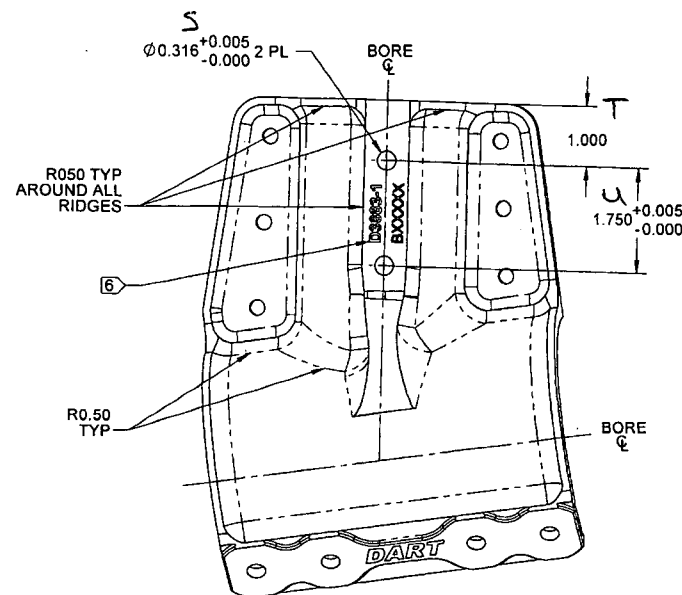
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

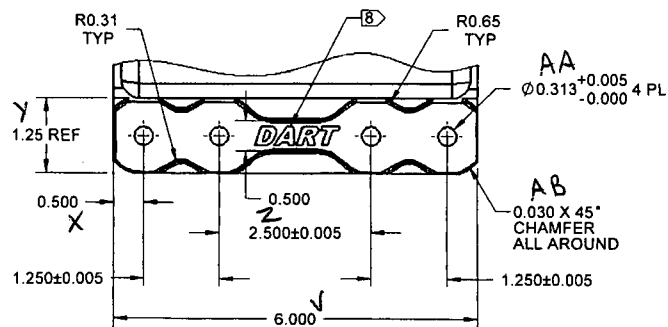
NOTE: Date & initial all entries



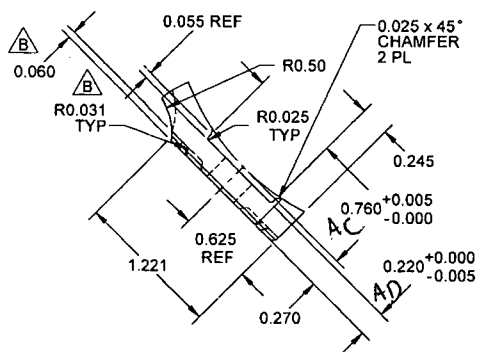
**SECTION A-A** C7-1



**VIEW D-D** C7-2







**VIEW B-B** B4-1  
(ROTATED FOR CLARITY)



**DETAIL C** B3-1  
SCALE 2X

51977

RELEASED  
09/07/15

DESIGN	RF	<b>DART AEROSPACE USA, INC.</b>	
DRAWN	RF	PORT HADLOCK, VA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3883	SHEET 2 OF 2
APPROVED		TITLE	SCALE
DE APPR.		OUTBOARD SADDLE	NTS
DATE	09.06.30	COPYRIGHT © 2009 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries